

ABSTRACT

The invention relates to a pneumatic suspension system (1) consisting of at least the following pneumatic suspension components:

- A pneumatic suspension bellows (2) made of elastomer material, said bellows having a contouring and enclosing an air chamber (10) with a variable volume;
- a pneumatic suspension cover (3) comprising a first fastening zone (4) with an outside diameter (D1), on which the one end of the pneumatic suspension bellows (2) is secured by means of a clamping ring (5);
- a pneumatic suspension piston (6) comprising a second fastening zone (7) with an outside diameter (D2) on which the other end of the pneumatic suspension bellows (2) is secured by means of a clamping ring (8) as well; as well as a roll-off piston with an outside diameter (D3), on whose outer wall the pneumatic suspension bellows can roll off in conjunction with the formation of a rolling fold;
- an outer guide (11) for the pneumatic suspension bellows (2); as well as
- a static zone (A) of the pneumatic suspension bellows (2), said static zone extending starting from the first fastening zone (4) up to the outer guide (11).

The pneumatic suspension system as defined by the invention is characterized in that the contoured pneumatic suspension bellows (1) comprises a dynamic zone (B) which, with respect to the pneumatic suspension system, is subjected to a change in the diameter of the pneumatic suspension bellows within the zone of the rolling fold as the bellows is being loaded and relieved, namely with respect to the outside diameter (D3) of the roll-off piston (9).

SECRET